## CLAIMS

I claim:

1. A magnetic recording head for generating servo tracks on a magnetic medium, the magnetic recording head comprising:

a substrate having a generally planar first surface;
a magnetically-permeable thin film disposed on the first surface; and
a gap pattern defined by the thin film, the gap pattern having at least one termination pattern that has at least one curved portion.

2. The device of claim 1 wherein the gap pattern is formed by removing a portion of the thin film using a focused ion beam oriented in a plane perpendicular to the plane of the first surface.

3. The device of claim 1 further comprising a coil magnetically coupled to the substrate, which controllably causes magnetic flux to flow through the substrate and the thin film.

4. The device of claim 1 wherein the thin film is FeXN.

5. The device of claim 1 wherein the thin film is FeAlN.

6. The device of claim 1 wherein the thin film is FeTaN.

7. The device of claim 2 wherein the gap has nearly parallel side walls.

8. The device of claim 1 wherein the termination pattern is generally rectangular-shaped and has two rounded outside corners.

9. The device of claim 8 wherein the termination pattern further has two rounded insider corners.

10. The device of claim 8 or 9 wherein the rounded corners correspond to a circle having a diameter of from about 10% to about 50% of the length of a side of the termination pattern.

11. The device of claim 1 wherein the termination pattern is generally circular-shaped.

12. A gap pattern for a magnetic recording head, the gap pattern comprising a pair of non-parallel, longitudinally extending gaps having a width and terminating in at least one termination pattern, wherein the termination pattern has at least one curved portion.

13. The gap pattern of claim 12 wherein the termination pattern is generally rectangular-shaped and has two rounded outside corners.

14. The gap pattern of claim 13 wherein the termination pattern further has two rounded insider corners.

15. The gap pattern of claim 13 or 14 wherein the rounded corners correspond to a circle having a diameter of from about 10% to about 50% of the length of a side of the termination pattern.

16. The gap pattern of claim 15 wherein the rounded corners correspond to a circle having a diameter of about 30% of the length of a side of the termination pattern.

17. The gap pattern of claim 12 wherein the termination pattern is generally square-shaped and has two rounded outside corners.

18. The gap pattern of claim 12 wherein the termination pattern is generally circular-shaped.

19. The gap pattern of claim 18 wherein the termination pattern has a diameter of from about 1.1 to about 4 times greater than the width.

20. The gap pattern of claim 18 wherein the termination pattern has a diameter of about 2 times greater than the width.

21. Magnetic media imprinted with a servo pattern having comprising a plurality of gap patterns which comprise a pair of non-parallel, longitudinally extending gaps having a width, and terminating at least one gap pattern with at least one termination pattern that has at least one curved portion.

22. The magnetic media of claim 21, wherein the termination pattern is generally circular-shaped.

23. The magnetic media of claim 21, wherein the termination pattern is generally rectangular-shaped and has two rounded outside corners.

24. The device of claim 1 wherein the servo pattern is a timing-based servo pattern.

25. The device of claim 1 wherein the an amplitude-based servo pattern.

26. The magnetic media of claim 21, wherein the servo pattern is a timing-based servo pattern.

27. Magnetic media imprinted with an amplitude-based servo pattern having comprising a plurality of gap patterns which comprise a pair of parallel, longitudinally extending gaps having a width, and terminating at least one gap pattern with at least one termination pattern that has at least one curved portion.